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## NOTICE OF ALLOWANCE AND FEE(S) DUE

21171 7590 11/07/2008

STAAS & HALSEY LLP  
SUITE 700  
1201 NEW YORK AVENUE, N.W.  
WASHINGTON, DC 20005

EXAMINER

ALUNKAL, THOMAS D

ART UNIT

PAPER NUMBER

2627

DATE MAILED: 11/07/2008

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/786,073

02/26/2004

Tae-young Heor

1793.1201

4848

TITLE OF INVENTION: COMPATIBLE OPTICAL PICKUP

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	02/09/2009

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.**

**THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.**

### HOW TO REPLY TO THIS NOTICE:

#### I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.**

# **PART B - FEE(S) TRANSMITTAL**

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE  
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**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

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21171 7590 11/07/2008

**STAAS & HALSEY LLP**  
SUITE 700  
1201 NEW YORK AVENUE, N.W.  
WASHINGTON, DC 20005

## **Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,073	02/26/2004	Tae-young Heor	1793.1201	4848

TITLE OF INVENTION: COMPATIBLE OPTICAL PICKUP

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	02/09/2009

EXAMINER	ART UNIT	CLASS-SUBCLASS
ALUNKAL, THOMAS D	2627	369-112240

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 \_\_\_\_\_
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 \_\_\_\_\_
- 3 \_\_\_\_\_

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s); (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_

Date \_\_\_\_\_

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This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,073	02/26/2004	Tae-youn Heor	1793.1201	4848
21171	7590	11/07/2008	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			ALUNKAL, THOMAS D	
			ART UNIT	PAPER NUMBER
			2627	
DATE MAILED: 11/07/2008				

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 594 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 594 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/786,073	HEOR ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	THOMAS D. ALUNKAL	2627	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment after non-final filed 7/30/08.
2. ☒ The allowed claim(s) is/are 1-3,6,9-11,13-17,19-21 and 23-38(renumbered 1-31).
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

**Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| <ol style="list-style-type: none"> <li>1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br/>Paper No./Mail Date _____</li> <li>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br/>of Biological Material</li> </ol> | <ol style="list-style-type: none"> <li>5. <input type="checkbox"/> Notice of Informal Patent Application</li> <li>6. <input type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date _____.</li> <li>7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment</li> <li>8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance</li> <li>9. <input type="checkbox"/> Other _____.</li> </ol> |
|--|---|

/Wayne Young/  
Supervisory Patent Examiner, Art Unit 2627

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments, see Remarks, filed 7/30/08, with respect to claims 1-3, 6, 9-11, 13-17, 19-21, 23-38 have been fully considered and are persuasive. Specifically, a certified translation of Korean Patent Application 2003-11955, upon which priority is claimed has been submitted and reviewed by the Examiner. Therefore, the priority filing date of February 26, 2003 of the present application predates the publication of Kim et al. (US PgPub 2003/0103441) which was relied upon in all the 35 U.S.C. 103(a) rejections of claims 1-3, 6, 9-11, 13-17, 19-21, 23-38. Accordingly, Kim et al. (US PgPub 2003/0103441) may no longer be relied upon in a 35 U.S.C. 103(a) rejection according to 35 U.S.C. 103(c).

## **EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Michael J. Badagliacca on 10/29/08 .

The application has been amended as follows:

Regarding claim 38:

**“The compatible optical pickup of claim 11, further comprising a sensing lens disposed between the plate-type beam splitter and the photo-detector 17 and focuses the first light beam 11a onto the photo-detector 17”** had been amended to **--The compatible optical pickup of claim 11, further comprising a sensing lens disposed between the plate-type beam splitter and the photo-detector and focuses the first light beam onto the photo-detector--**.

***Allowable Subject Matter***

Claims 1-3, 6, 9-11, 13-17, 19-21, 23-38 are allowed.

The following is an examiner's statement of reasons for allowance: The prior art taken either singularly or in combination fails to anticipate or fairly suggest the limitations of the independent claims 1, 17, and 33.

Regarding claim 1, the prior art taken either singularly or in combination fails to anticipate or fairly suggest a compatible optical pickup which can be compatibly used for first through third media having different recording densities and formats, comprising: a first light source which emits a first light beam having a first wavelength suitable for the first recording medium; a twin light source which emits second and third light beams respectively having second and third wavelengths suitable for the corresponding second and third recording media; a plate-type beam splitter which transmits and reflects the second and third light beams in a predetermined ratio; a first objective lens which condenses the first light beam to form a light spot for recording and/or reproduction of the first recording medium; a second objective lens which condenses the second and

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third light beams to form light spots for recording and/or reproduction of the received one of the second and third recording media; an actuator which drives the first and second objective lenses; a first photo-detector which receives the first light beam reflected from the first recording medium to detect an information signal and/or an error signal; and a second photo-detector which receives the second and third light beams reflected from the received one of the second and third recording media to detect information signals and/or error signals, wherein the first objective lens forms a first numerical aperture for use with the first recording medium and a second numerical aperture other than the first numerical aperture for use with the second recording medium, the second objective lens forms a third numerical aperture which is other than the first and second numerical apertures for used with the third recording medium, ***WD1 is a working distance of one of the first and second objective lenses which has a short working distance, WD2 is a working distance of the other one of the first and second objective lenses which has a long working distance, the first and second objective lenses are installed to satisfy the below relationship so as to prevent the one objective lens having the short working distance from contacting the received one of the first through third recording media during loading of the received recording medium and while allowing operation of the other one of the first and second objective lenses having the long working distance: WD2 is greater than or equal to WD1 and a basic separating distance of the one objective lens relative to the corresponding one of the first through third recording media is  $WD1 + \alpha$ , and  $\alpha = |WD2 - WD1| \times (0.1 \sim 1.0)$ , and at least one of the first***

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***and second objective lenses is formed so that a wavefront aberration occurring mainly due to a tilt of the objective lens and a wavefront aberration occurring mainly due to a tilt of light incident on the objective lens becomes a same type of aberration.***

Regarding claims 17 and 33, these claims recite limitations similar to those in claim 1 and the prior art taken either singularly or in combination fails to anticipate or fairly suggest the compatible optical systems of claims 17 and 33, respectively, wherein ***WD1 is a working distance of one of the first and second objective lenses which has a short working distance, WD2 is a working distance of the other one of the first and second objective lenses which has a long working distance, the first and second objective lenses are installed to satisfy the below relationship so as to prevent the one objective lens having the short working distance from contacting the received one of the first through third recording media during loading of the received recording medium and while allowing operation of the other one of the first and second objective lenses having the long working distance: WD2 is greater than or equal to WD1 and a basic separating distance of the one objective lens relative to the corresponding one of the first through third recording media is  $WD1 + \alpha$ , and  $\alpha = |WD2 - WD1| \times (0.1 \sim 1.0)$ , and at least one of the first and second objective lenses is formed so that a wavefront aberration occurring mainly due to a tilt of the objective lens and a wavefront aberration occurring mainly due to a tilt of light incident on the objective lens becomes a same type of aberration.***



Dependent claims 2-3, 6, 9-11, 13-16, 19-21, 23-32, and 34-38 are allowed with their respective base claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ueda et al. (US 6,314,064) discloses an optical pickup device and optical disc device. Hayashi et al. (US 6,775,065) discloses a diffraction element and optical pickup device. Nagashima et al. (US 6,304,526) discloses an optical head. Kasahara et al. (US 5,930,214) discloses a recording/reproducing optical head apparatus compatible with different optical media. Lee et al. (US 6,147,955) discloses an optical pickup device to read from and record information to disks of different thickness. Ichimura (US 6,324,133) discloses an optical recording and reproducing apparatus and optical recording and reproducing method. Takeuchi (US 6,515,955) discloses an objective optical system for an optical pick-up. Tsukahara et al. (US 6,021,107) discloses an optical pick device. Kim et al. (US 6,895,593) discloses an actuator having a plurality of objective lenses installed in a lens holder used with an optical pickup.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to THOMAS D. ALUNKAL whose telephone number is (571)270-1127. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571)272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thomas D Alunkal/  
Examiner, Art Unit 2627

/Wayne Young/  
Supervisory Patent Examiner, Art Unit 2627